

P96042b

CLAIMS

1. A drive mechanism for use in a drug delivery device is provided comprising:
a housing having a helical thread, preferably an internal helical thread;
5 a dose dial sleeve having a helical thread engaged with the helical thread of the said housing;
a drive sleeve releasibly connected to the said dose dial sleeve;
and a clutch means located between the dose dial sleeve and the drive sleeve;
characterized in that,
 - 10 a) when the dose dial sleeve and the drive sleeve are coupled, both are allowed to rotate with respect to the housing; and
 - b) when the dose dial sleeve and the drive sleeve are de-coupled, rotation of the dose dial sleeve with respect to the housing is allowed, whilst rotation of the drive sleeve with respect to the housing is not allowed, whereby axial movement
15 of the drive sleeve is allowed so that a force is transferred in the longitudinal direction to the proximal end of the drug delivery device.
2. A drive mechanism according to claim 1, comprising a piston rod adapted to operate through the housing and transfer the said force in the said longitudinal
20 direction to the proximal end of the drug delivery device.
3. The drive mechanism according to claim 1 or 2, wherein said dose dial sleeve further comprises a helical thread, which has the same lead as the lead of the helical thread of the said drive sleeve.
25
4. The drive mechanism according to claim 1 or 2, wherein the said piston rod is designed to have attached a toothed gear designed to mesh with the threads of the drive sleeve and the teeth of a toothed rack, whereby the said toothed rack is fixed to the housing
30
5. An assembly for use in a drug delivery device comprising the drive mechanism as defined in any of claim 1 to 4.

P96042b

6. A drug delivery device comprising the drive mechanism as defined in any of claim 1 to 4 or the assembly of claim 5.

5 7. The drug delivery device according to claim 6, which is a pen-type device.

8. The drug delivery device according to any of claim 6 to 7, which is an injector-type device.

10 9. The drug delivery device according to any of claim 6 to 8, which comprises a needle.

10. The drug delivery device according to any of claim 6 to 8, which is a needle-free device.

15

11. The use of a drug delivery device as defined in any of claims 6 to 10 for dispensing a medicinal product.

12. The use of a drug delivery device according to claim 11 for dispensing a
20 pharmaceutical formulation comprising an active compound selected from the group consisting of insulin, growth hormone, low molecular weight heparin, their analogues, and their derivatives.

13. The method of manufacturing or assembling a drug delivery device, comprising
25 the step of providing a drive mechanism as defined in any of claims 1 to 4 or an assembly as defined in claim 5.